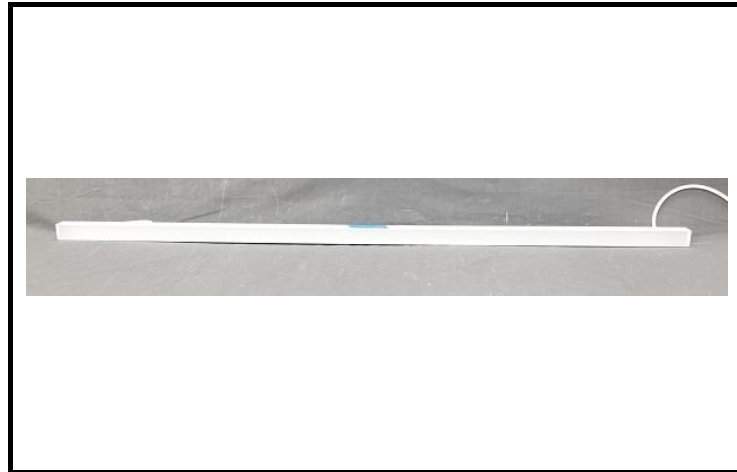




GRM10-4-35-ND-H-A-SM-WH

Luminaire Description: White rectangular metal housing with diffuse plastic lens
Lamp: 96 White LEDs
Mounting: Surface – Ceiling
Ballast/Driver: One (1) Philips Advance XI040C110V054BST1

Luminaire



Luminaire Characteristics

Luminous Length: 44.25 in.
Luminous Width: 1.000 in.

Summary of Results

Integrating Sphere

Luminous Flux: 2288 Lumens
Efficacy: 78.78 lm/w
CCT: 3502 K
CRI (Ra): 93.8

Distribution

Total Luminaire Output: 2216 Lumens
Luminaire Efficacy: 76.1 lm/w
Maximum Candela: 809 Candela

Electrical Data at 120 VAC

Test Temperature: 24.9 °C
Voltage: 120.1 VAC
Current: 0.2432 A
Power: 29.04 W
Power Factor: 0.995
Frequency: 60 Hz
Current THD: 8.60 %



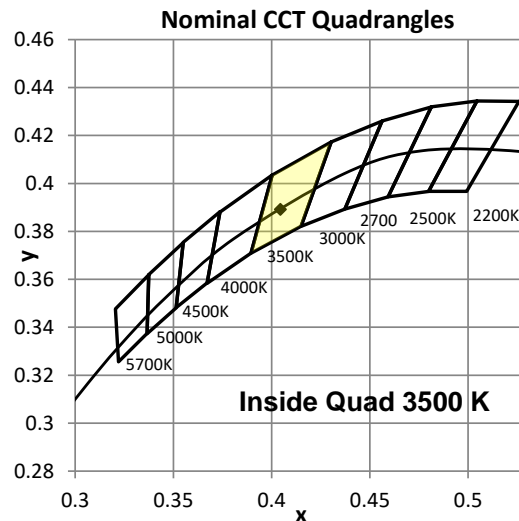
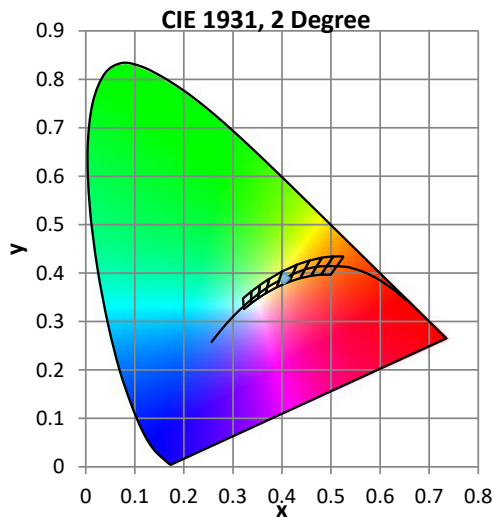
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.1 VAC	0.2432 A	29.04 W	0.995	60 Hz	8.60 %

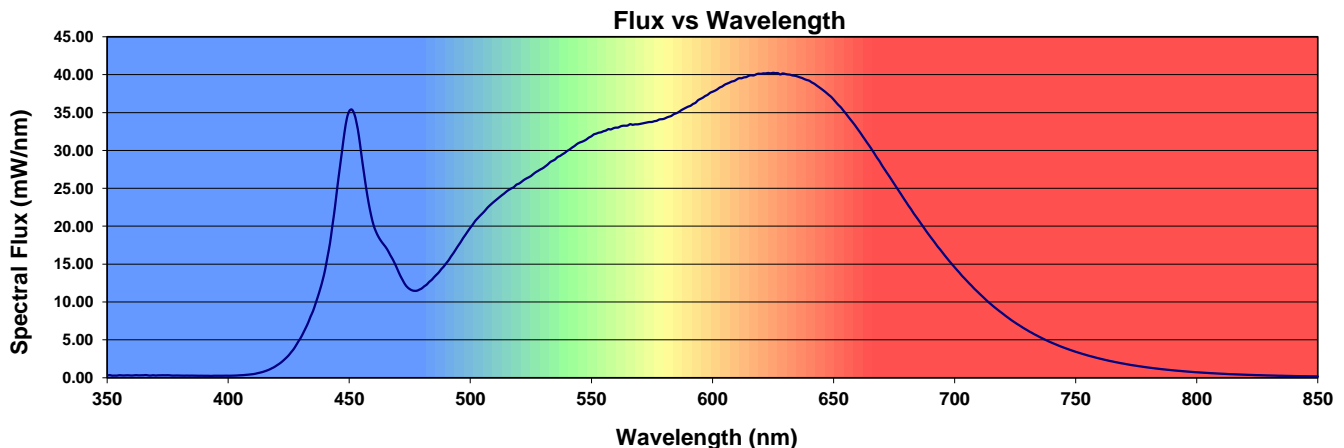
Summary of Results

Total Output:	2288 Lumens	Chromaticity (x):	0.4045
Efficacy:	78.8 lm/w	Chromaticity (y):	0.3892
CCT:	3502 K	Chromaticity (u'):	0.2359
CRI (Ra):	93.8	Chromaticity (v'):	0.5105
CRI (R9):	74.6	TM-30 Rf:	92.2
Peak Wavelength:	627 nm	TM-30 Rg:	100.6
Dominant Wavelength:	581 nm	Duv:	0.0007
S/P Ratio:	1.61		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93.8	94.6	95.5	94.3	94.4	93.6	92.7	95.6	90.0	74.6	87.9	94.0	76.7	94.8	96.2	93.1





Distribution - Goniophotometer

Distribution Test Conditions

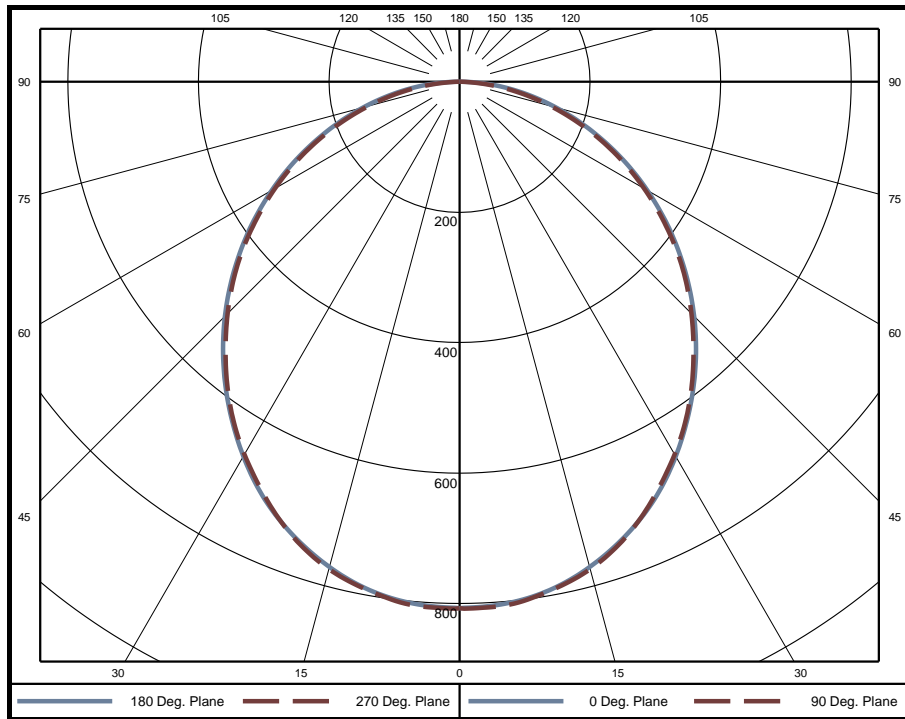
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.1 VAC	0.2436 A	29.11 W	0.995	60 Hz	8.55 %

Summary of Results

Spacing Criteria
 0-180: 1.22
 90-270: 1.22

Total Lumen Output: 2216 Lumens
Luminaire Efficacy: 76.1 lm/w
Maximum Candela: 809 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	19.3	0.9%	60-65	145.7	6.6%	120-125	0	0.0%
5-10	57.1	2.6%	65-70	121.0	5.5%	125-130	0	0.0%
10-15	92.9	4.2%	70-75	93.5	4.2%	130-135	0	0.0%
15-20	125.0	5.6%	75-80	65.0	2.9%	135-140	0	0.0%
20-25	152.1	6.9%	80-85	36.6	1.7%	140-145	0	0.0%
25-30	173.2	7.8%	85-90	10.2	0.5%	145-150	0	0.0%
30-35	188.0	8.5%	90-95	0	0.0%	150-155	0	0.0%
35-40	196.2	8.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	197.9	8.9%	100-105	0	0.0%	160-165	0	0.0%
45-50	193.4	8.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	182.9	8.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	166.6	7.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1004	45.3%
0-60	1745	78.7%
0-90	2217	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9	806.9
5	802.9	801.7	803.8	805.6	805.5	805.6	803.8	801.7	802.9	801.7	803.8	805.6	805.5	805.6	803.8	801.7
10	791.4	790.9	793.8	794.0	792.6	794.0	793.8	790.9	791.4	790.9	793.8	794.0	792.6	794.0	793.8	790.9
15	769.9	772.0	773.6	773.8	773.4	773.8	773.6	772.0	769.9	772.0	773.6	773.8	773.4	773.8	773.6	772.0
20	741.4	743.9	744.8	744.0	743.4	744.0	744.8	743.9	741.4	743.9	744.8	744.0	743.4	744.0	744.8	743.9
25	706.2	708.7	706.9	704.6	703.4	704.6	706.9	708.7	706.2	708.7	706.9	704.6	703.4	704.6	706.9	708.7
30	662.5	665.6	662.8	660.5	659.4	660.5	662.8	665.6	662.5	665.6	662.8	660.5	659.4	660.5	662.8	665.6
35	614.1	617.2	615.0	612.0	611.2	612.0	615.0	617.2	614.1	617.2	615.0	612.0	611.2	612.0	615.0	617.2
40	562.6	565.8	562.9	558.8	557.6	558.8	562.9	565.8	562.6	565.8	562.9	558.8	557.6	558.8	562.9	565.8
45	508.2	511.1	508.5	503.8	502.7	503.8	508.5	511.1	508.2	511.1	508.5	503.8	502.7	503.8	508.5	511.1
50	450.9	453.7	451.5	447.6	446.5	447.6	451.5	453.7	450.9	453.7	451.5	447.6	446.5	447.6	451.5	453.7
55	392.0	394.7	391.7	388.0	386.6	388.0	391.7	394.7	392.0	394.7	391.7	388.0	386.6	388.0	391.7	394.7
60	331.5	333.8	331.4	327.3	326.2	327.3	331.4	333.8	331.5	333.8	331.4	327.3	326.2	327.3	331.4	333.8
65	270.9	272.7	270.5	266.9	265.4	266.9	270.9	272.7	270.9	272.7	270.5	266.9	265.4	266.9	270.5	272.7
70	211.1	212.6	209.2	206.0	204.2	206.0	209.2	212.6	211.1	212.6	209.2	206.0	204.2	206.0	209.2	212.6
75	153.1	153.3	149.5	146.6	144.5	146.6	149.5	153.3	153.1	153.3	149.5	146.6	144.5	146.6	149.5	153.3
80	98.7	98.0	93.5	90.9	88.7	90.9	93.5	98.0	98.7	98.0	93.5	90.9	88.7	90.9	93.5	98.0
85	47.6	44.9	40.8	37.9	36.2	37.9	40.8	44.9	47.6	44.9	40.8	37.9	36.2	37.9	40.8	44.9
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

	0	45	90
0	28270	28270	28270
45	25170	25190	24900
55	23940	23920	23610
65	22460	22420	22000
75	20720	20240	19550
85	19150	16390	14550

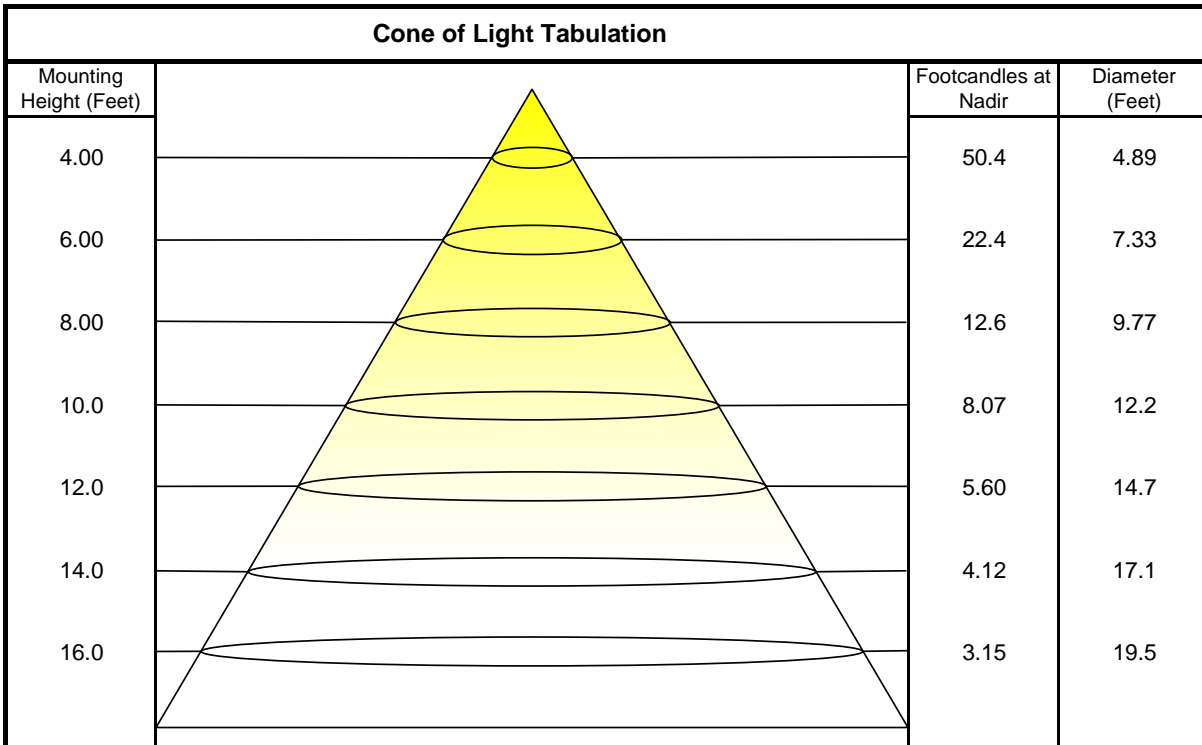


Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as percent of total lumen output delivered to the task surface **																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	51	43	37	63	51	42	36	49	42	36	48	41	36	46	40	36	34
8	61	47	38	33	59	46	38	33	45	38	32	44	37	32	43	36	32	30
9	57	43	35	29	55	43	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	31	26	24

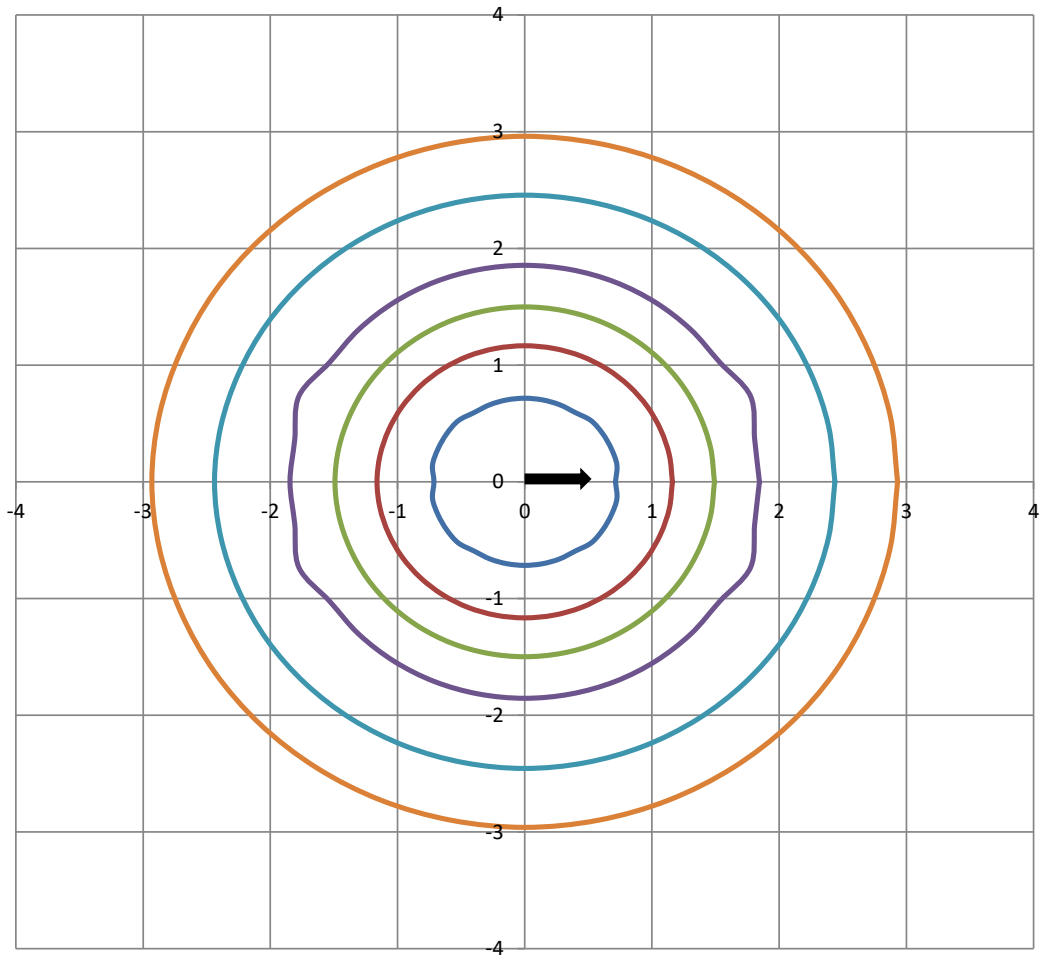
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	806.9 Candela
Central Cone Intensity:	806 Candela
Beam Flux:	1541.4 Lumens
Beam Angle (0-180):	108.0 Degrees
Beam Angle (90-270):	107.3 Degrees
Field Angle (0-180):	163.4 Degrees
Field Angle (90-270):	161.5 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

